Claims 22-30, 32, 34, 35 and 37-39 have been rejected under 35 USC § 102(b) as being anticipated by British Publication 1,257,827. However, as hereinafter described, it is believed that such claims are not shown or suggested by the '827 reference. As such, withdrawal of the Examiner's rejection under 35 USC § 102(b) is respectfully requested.

Claim 22 defines a dampening cylinder having a cylindrical housing, a piston slidably extending through a cavity in the housing and a flange projecting from the piston so as to divide the cavity in the housing into first and second portions. A flow conduit has a first end communicating with the first portion of the cavity and a second end communicating with the second portion of the cavity. The flow conduit includes first and second control valves for controlling the flow of fluid between first and second portions of the cavity. Each flow control valve includes a flow regulator having a plurality of user selectable discrete settings for controlling the rate at which the fluid flows through a corresponding flow control valve. As hereinafter described, nothing in the cited references shows or suggests providing flow regulators in the flow control valves to control the **flow rate** and to provide a **discrete metered fluid flow** therethrough.

The British '827 specification discloses a device for balancing the forces inertia of reciprocating stands of cold rolling mills. As best seen in Figures 2 and 3, an air cylinder is provided having a piston slidably received therein which defines first and second working spaces in the air cylinder. The air spaces are interconnected by a conduit that includes first and second maximum pressure valves. It is intended that the pressure in each working space be equal. In order to accomplish the task, each of maximum pressure valves 35 is adjusted so as to satisfy condition:

$$C.\ X=P_m.S$$

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wherein C and X are the rigidity and deformation of spring 50, respectively; P_m is the maximum specific air pressure in the working spaced for a given steady rolling process; S is the effective area of disk valve 48.

If movement of the piston disturbs the equality, one of the maximum pressure valves 35 opens and the excess air is transferred from one working space to the other. As described, it can be appreciated that the structure provided the British '827 specification merely regulates the maximum pressure within opposite sides of air cylinder 1. In other words, the pressure valves disclosed in the British '827 specification merely provide a mechanism for controlling the pressure at which maximum pressure vanes 35 open. The British '827 specification provides **no** mechanism for controlling the **rate of** air flow through the conduit interconnecting the first and second working spaces or for providing **a discrete metered fluid flow** therethrough. Consequently, in such circumstances wherein controlled movement of the piston is required, the structure disclosed in the British '827 specification is inadequate. For example, if a large force is placed on one end of the piston that urges the piston to slide through a cylinder at one rate, it may be highly desirable when the force is removed to have the piston to return to its original position, at a second, slower rate. This operation can be significant in certain applications where the cylinder controls movement of an object like the transfer deck described in the specification of the present application. For example, when heavy articles are positioned on the transfer deck, it is imperative the deck travel at such a speed as to not injure the operator thereof. However, if a heavy article is placed on a deck utilizing the maximum pressure valves disclosed in the '827 reference and such article generates greater than the maximum pressure, the pressure valves would open such that air would quickly flow from one side of the cylinder to the other. As a result, the transfer deck would drop quickly in a hazardous manner.

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Similarly, when the articles are subsequently removed from the transfer deck, it is imperative that the deck return to its original position at such a speed as to not injure the operator thereof. If the heavy object was removed from the deck utilizing the maximum pressure valves disclosed in the '827 specification, the deck would quickly return to its original position (in order to reach equilibrium). This, in turn, could provide a significant hazard to the operator. By providing flow regulators, as required by independent claim 22, an operator has the ability to control the speed at which the piston slides through the cylinder, thereby overcoming the disadvantages associated with the structure disclosed in the cited reference. In view of the foregoing, it is believed that independent claim 22 defines over the cited reference and passage to allowance is respectfully requested.

Claims 23-29 depend either directly or indirectly from independent claim 21 and further define a dampening cylinder not shown or suggested in the prior art. It is believed that claims 23-29 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Claim 30 defines a dampening cylinder incorporating a cylindrical housing and a piston slidable through the housing. A control valve structure is provided to control the flow of fluid between first and second portions of a cavity in the housing. The control valve structure includes a control valve with a flow regulator having a plurality of user selectable settings. The flow regulator provides for the discrete metering of the fluid flowing through the first flow control valve. The flow control valve structure also includes a second control valve with a flow regulator having a plurality of user selectable settings. The flow regulator of the second control valve provides for the discrete metering of the fluid flowing through the second control valve.

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As heretofore described with respect to claim 22, the British '827 specification does not suggest providing control valves having flow regulators with user selectable settings which provide a discrete metered fluid flow through the control valves. Such a structure is entirely absent from the cited reference. As such, it is believed that independent claim 30 defines over the cited reference and is in proper form allowance.

Claims 32, 34-35 and 37 depend either directly or indirectly from independent claim 30 and further define a dampening cylinder not shown or suggested in the prior art. It is believed that such claims are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Similar to claim 30, claim 38 defines a dampening cylinder having first and second control valves. Each control valve includes a flow regulator having a plurality of user selectable settings. The settings of the flow regulators allow a user to provide a discrete metered fluid flow through the corresponding flow control valves. As described with respect to independent claims 22 and 30, such a structure is not shown or suggested in the cited reference. As such, it is believed that independent claim 38 defines over the cited reference and passage to allowance is respectfully requested.

Claim 39 depends directly from independent claim 38 and further defines a dampening cylinder not shown or suggested in the prior art. It is believed that claim 39 is allowable as depending from an allowable base claim and in view of the subject matter of the claim.

Applicant believes that the present application with claims 22-30, 32, 34-35, and 37-39 is in proper form for allowance and such action is earnestly solicited.

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A one (1) month Petition For Extension of Time Under 37 CFR 1.136(a) is enclosed for the above-identified application. The Director is authorized to charge the one month fee in the amount of $55.00 to our Deposit Account No. 50-1170. The Examiner is authorized to charge any additional fees associated with this or any other communication, or credit any overpayment, to Deposit Account 50-1170.

The Applicant believes there are no fees associated with this transmission. However, the Commissioner is hereby authorized to charge payment of any fee associated with this or any other communication or credit any overpayment to Deposit Account No. 50-1170.

Respectfully submitted,

Peter C. Stomma
Registration No.36,020

Dated: 10/30/02

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APPENDIX SHOWING CHANGES IN S.N. 09/769,590

Please amend claims 22, 30 and 38, as follows:

In The Claims:

22. (Twice Amended) A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing; and

a flow conduit having a first end communicating with the first portion of the cavity in the housing and a second end communicating with the second portion of the cavity in the housing, the flow conduit including:

a first and second flow control valves for controlling the flow of fluid between the first and second portions of the cavity in the housing, each flow control valve including a flow regulator having a plurality of user selectable discrete settings for controlling the flow rate [at which the] and for providing a discrete metered fluid [flows] flow through a corresponding flow control valve.

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30. (Twice Amended) A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;

a first conduit having a first end communicating with the first portion of the cavity in the housing and a second end;

a second conduit having a first end communicating with the second portion of the cavity in the housing and a second end; and

a control valve structure disposed between the first and second conduits for controlling the flow of fluid between the first and second portions of the cavity in the housing, the control valve structure includes first and second flow control valves in series between the first and second conduits;

wherein the first flow control valve includes a flow regulator having a plurality of user selectable settings and being movable into the first flow path, the flow regulator providing a discrete metered [controlling the rate at which the] fluid [flows] flow through the first flow path; and

wherein the second flow control valve includes a flow regulator having a plurality of user selectable settings and being movable into the first flow path of the second flow control valve, the flow regulator providing a discrete metered [controlling the rate at which the] fluid [flows] flow through the first flow path.

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38. (Twice Amended) A dampening cylinder, comprising:

a cylindrical housing having first and second ends and an inner surface defining a cavity in the housing for receiving a fluid therein;

a piston slidably extending through the cavity in the housing;

a flange projecting from the piston and positioned within the cavity so as to divide the cavity in the housing into first and second portions, the flange terminating at a radially outer edge which forms a slidable interface with the inner surface of the housing;

a first conduit having a first end communicating with the first portion of the cavity in the housing a second end;

a second conduit having a first end communicating with the second portion of the cavity in the housing and a second end;

a first flow control valve having first and second orifices interconnected by first and second parallel flow paths, the first orifice connected to the second end of the first conduit so as to allow the first and second flow paths through the first flow control valve to communicate with the first portion of the cavity through the first conduit, the first flow control valve including:

a flow regulator having a plurality of user selectable settings and being movable into the first flow path through the first flow control valve, the flow regulator providing a discrete metered [controlling the rate at which the] fluid [flows] flow through the first flow path; and

a check valve disposed in the second flow path through the first flow control valve, the check valve allowing the flow of fluid through the second flow path through the first flow control valve in a first direction and preventing the flow of fluid through the second flow path through the first flow control valve in a second direction;

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a second flow control valve having first and second orifices interconnected by first and second parallel flow paths and being connected in series with the first flow control valve, the first orifice of the second flow control valve connected to the second end of the second conduit so as to allow the first and second flow paths through the second flow control valve to communicate with the second portion of the cavity through the second conduit, and the second orifice of the second flow control valve communicating with the first orifice of the first flow control valve, the second flow control valve including:

a flow regulator having a plurality of user selectable settings and being movable into the first flow path through the second flow control valve, the flow regulator providing a discrete metered [controlling the rate at which the] fluid [flows] flow through the first flow path; and

a check valve disposed in the second flow path through the second flow control valve, the check valve allowing the flow of fluid through the second flow path through the second flow control valve in the second direction and preventing the flow of fluid through the first flow path through the second control valve in the first direction.

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